

ABSTRACT

DISSERTATION/THESIS/RESEARCH PAPER/CREATIVE PROJECT: Population response of a declining songbird to silviculture: How Cerulean Warbler (*Setophaga cerulea*) territory size and settlement patterns fare in the face of forest disturbance

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DATE: May 2012

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Over the past five decades, populations of the Cerulean Warbler (*Setophaga cerulea*) have declined precipitously and the response of populations to silviculture has been identified as a high-priority research need. This species was studied in nine forest management units in Southern Indiana following a harvest that took place in 2008. Males were detected, territories were demarcated, and male age-class was determined to identify settlement patterns. Vegetation was measured in all territories and associated random non-use sites. Data analyzed in ArcMap (ArcGIS 10) show that Cerulean Warbler territory size was smallest and density was highest in even-aged units. Territories contained a greater number of small woody species than non-use sites but no vegetative differences existed between male age-classes. Instead, males appeared to select areas by relying on social cues from experienced neighbors. It is possible that “social attraction” management techniques could influence male Cerulean Warbler settlement patterns, providing a valuable tool for the conservation of this species.